



7555-01-P

NATIONAL SCIENCE FOUNDATION

**Radio Receiver Systems: R&D Innovation Needs and Impacts
on Technology Policy**

AGENCY: The National Coordination Office (NCO) for Networking and Information Technology Research and Development (NITRD).

ACTION: Notice of Workshop.

SUMMARY: This workshop will focus on spectrum sharing radio receiver systems and will provide a forum for information exchange and the identification of relevant research and development opportunities.

DATES: The workshop will take place on May 5, 2017 from 8:30 a.m. to 5 p.m. ET.

ADDRESSES: The workshop will take place at the National Science Foundation, 4201 Wilson Blvd. Arlington, VA 22230. Participation in the workshop is by invitation only. Seating for observers is limited and will be available on a first come first served basis. This event will also be webcast. The event agenda and information about the webcast will be available the week of the event at:

https://www.nitrd.gov/nitrdgroups/index.php?title=WSRD_Workshop_IX.

FOR FURTHER INFORMATION, CONTACT: Wendy Wigen at 703-292-4873 or wigen@nitrd.gov. Individuals who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1-800-877-8339, which is accessible 24 hours a day, 7 days a week, 365 days a year (including federal holidays).

SUPPLEMENTARY INFORMATION:

Overview: This notice is issued by the National Coordination Office for the Networking and Information Technology Research and Development (NITRD) Program. Agencies of the NITRD Program are holding a workshop of experts from government, private industry, and academia to provide a forum for information exchange on spectrum sharing radio receiver systems and identify relevant research and development opportunities. Further information about the NITRD may be found at:
<https://www.nitrd.gov>.

Background: Principles of co-existence and interference tolerance are often overlooked and under-exploited in today's radio receiver systems. For example, a receiver's ability to accept wanted signals or reject unwanted signals impacts the quality of the information transmitted. The workshop will address various signal reception topics including technology advances for receivers, transmitters, filters, antenna design, signal processing techniques, and policy issues. While focus has been on the transmitter side of the radio system in the past,

focusing on the receiver systems early in the next generation technology development process has been identified as an important step in assuring interference tolerance.

Workshop Goals:

- Outline the wireless spectrum sharing receiver needs, scenarios and issues for the short-term and long-term.
- Discuss the technology and regulatory frameworks that can deliver appropriate receiver solutions, including those needed for emerging IoT scenarios.
- Identify innovative tools, techniques, experimentation, and recommendations for additional research.

Workshop Objectives: The objectives of the workshop are to establish the current state-of-the-art, define characteristics that are needed in the radio receiver system to better facilitate spectrum sharing, identify the opportunities and challenges in current receiver technologies, and examine the implementation and adoption issues that exist.

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